

Application No. 09/976,537  
Amendment dated January 8, 2004  
Reply to Office Action of September 8, 2003

### **REMARKS/ARGUMENTS**

Responsive to the Official Action mailed September 8, 2003, applicants have further amended the claims of their application in an earnest effort to place this case in condition for allowance. Specifically, claims 2, 3, and 5 have been canceled, and independent claims 1 and 11 amended. Reconsideration is respectfully requested.

In the Action, the Examiner has maintained her rejection of the pending claims under 35 U.S.C. §103, with reliance upon U.S. Patent No. 5,801,107, to Everhart et al., in view of U.S. Patent No. 6,200,669, to Marmon et al. However, it is respectfully maintained that even when combined, these references clearly fail to teach or suggest applicants' unique, differentially entangled fabric structure. Accordingly, the Examiner's rejection is respectfully traversed.

In applicants' previous response, the shortcomings of Everhart et al. in teaching or suggesting the present invention were discussed. Again, it is important to note that there is *no teaching or suggestion* of effecting *differential entanglement* between outer surfaces of a fabric and a region therebetween, in accordance with the presently pending claims.

Everhart et al. contemplates the integration of plural fibrous layers, including wood pulp and *mesh* layers, and thus does not teach or suggest a *homogeneous* fibrous structure. Rather, Everhart et al. contemplates that a liquid transport material be formed "composed of pulp fibers hydraulically needled into a nonwoven fibrous structure" (column 5, lines 37-40). Thus, this reference clearly does not teach or suggest the formation of a homogeneous fibrous structure.

Moreover, it is not at all apparent from the teachings of this reference that any significant entanglement, much less differential entanglement, of the underlying mesh nonwoven fabric is effected. Rather, it is understood that this reference contemplates an integration of the wood pulp fibers into the associated mesh nonwoven fabric, for formation of a liquid transport medium. It is respectfully maintained that this reference cannot teach or suggest applicants' claimed structure, including a homogeneous fibrous matrix, having opposite, highly entangled surfaces, and a lightly entangled inner core region positioned therebetween. Formation of such a construct is simply not contemplated by Everhart et al.

The shortcomings in the teachings of Everhart et al. are particularly evident from study of the Examples set forth therein. In each of Examples 1-11, the underlying structure employed for fabric formation is a *mesh fabric*. Clearly, entanglement of this mesh structure is *not contemplated*, but rather, this reference contemplates that the mesh structure provides a framework about which the associated pulp fibers are entangled. This is simply fundamentally different than applicants' claimed structure, including a homogeneous fibrous structure having highly entangled opposite surfaces, and a lightly entangled region therebetween.

It is respectfully maintained that the clear deficiencies in the teachings of the principal Everhart et al. reference are not overcome by the secondary Marmon et al. patent. Marmon et al. is directed to formation of fabric structures from so-called multi-

component fibers. These types of fibers have distinct segments, in cross-section, which segments can be disassociated attendant to energy input, such as hydraulic needling.

Again, it is respectfully maintained that this reference has *no teachings* of providing a single, homogeneous fibrous batt, which is *differentially entangled*, with highly entangled opposite outer surfaces, and a relatively lightly entangled region therebetween. Rather, this patent specifically contemplates that a multi-component fibrous structure is thermally bonded, with subsequent hydroentanglement separating the individual segments of the unitary multi-component fibers into microfibers. The patent also specifically contemplates that the microfibers have "partially degraded bond areas comprising from about 5% to about 50% at the surface area of the web" (see Abstract).

In the Action, the Examiner has stated that in view of the teachings of Marmon et al., "it would have been obvious to one of ordinary skill at the time the invention was made to have used Marmon's dual sided hydroentangled method on the fibrous structure of Everhart et al., motivated by the desire to create a fabric that has enhanced softness". Applicants must respectfully disagree. In fact, it is respectfully submitted that to effect hydroentanglement of the opposite surfaces of the compound fabric formed in accordance with Everhart et al. would be contrary to the teachings of this reference.

As noted above, Everhart et al. is specifically limited in its teachings to the provision of a *mesh fabric*, upon one surface of which a pulp fibrous structure (such as a wet-laid pulp layer) is positioned. Hydroentanglement, under relatively low energy, is thereafter effected for integrating the pulp structure into the supporting mesh. If,

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subsequent to initial entanglement, this structure were inverted, and thereafter subjected to hydraulic needling, such an action would tend to *wash the pulp fibers off of the mesh*.

Thus it is respectfully maintained that not only does Marmon et al. fail to overcome the deficiencies in the teachings of Everhart et al., it would clearly not be appropriate to employ the dual-sided entangling technique of Marmon et al. for formation of the compound pulp/mesh structure specifically contemplated by Everhart et al.

In the Action, the Examiner acknowledges that "Everhart et al. and Marmon et al. do not explicitly teach the claimed highly entangled outer surface region and lightly entangled inner core region". The Examiner has stated "it is reasonable to presume that this varying degree of entanglement is inherent to Everhart's and Marmon's invention". Applicants must respectfully submit that this is not a sound basis for rejection of applicants' pending claims. Applicants' claims specifically provide for a homogeneous fabric construct having *opposite surfaces* which are highly entangled, with a relatively lightly entangled region therebetween. Since, as noted above, it *would not* be an obvious expedient to apply hydraulic energy, as contemplated by Marmon et al., to both sides of a pulp/mesh composite structure as contemplated by Everhart et al., it is respectfully submitted that it is *not* "reasonable to presume" that the varying degree of entanglement is inherent to the resultant structure.

Applicants respectfully refer to M.P.E.P. Section 2143.01, which specifically admonishes that "the proposed modification cannot render the prior art unsatisfactory for its intended purpose". Clearly, there is nothing in the Everhart et al. reference itself which


Application No. 09/976,537  
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would suggest it is appropriate to subject opposite expansive surfaces of that composite structure to hydraulic needling. To the contrary, those skilled in the art will understand from Everhart et al. that hydraulic needling is effected to integrate the pulp fiber structure into the associated mesh support fabric. As such, subjecting the opposite surface of this composite structure to hydroentanglement, as suggested by the Examiner with reliance upon Marmon et al., would clearly "render the prior art unsatisfactory for its intended purpose", supporting applicants' position that their invention would not be obvious in light of the combined teachings of Everhart et al. and Marmon et al.

In view of the foregoing, formal allowance of claims 1, 4, 7, and 11 is believed to be in order and is respectfully solicited. Should the Examiner wish to speak with applicants' attorneys, they may be reached at the number indicated below.

The Commissioner is hereby authorized to charge any additional fee which may be required in connection with this submission to Deposit Account No. 23-0785.

Respectfully submitted,

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